

Model MS-1

Pocket-Mini-Stroboscope

Standard features:

- Small, handy unit for one hand operation
- Easy to read LCD display
- For measuring 30 to 12500rpm and higher using „harmonics“ (see page F1)
- Brightest flash in his class
- Trigger input for external triggering the strobe
- Battery operated with high quality NiMH batteries and short charging time
- Last displayed value is stored and strobe runs at that speed when switched on again
- Tripod mounting facility



Model MS-1
with standard attachments in carrying case

Model MS-1

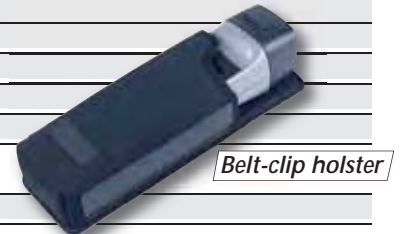
800 Lux*
* distance to measure 20cm

Specifications

Model MS-1

Flash range:	0.5 - 208.3 Hz = 30 - 12500 min ⁻¹ (rpm)
Accuracy:	± 0.01 % of displayed value ± 1 digit
Resolution:	± 1 min ⁻¹
Light intensity:	approx. 800Lux 20cm distance
Flash duration:	< 20µs
Display:	5 digit LCD, 9mm high
Flash tube:	Xenon-Longlife (Lifetime approx. 100 million flashes)
External trigger input:	0-5V TTL compatible, U _{out} = 7.2V unregulated, R _i = 100KΩ
Power supply:	NiMH rechargeable battery (1h continuous use, 3.5h recharging time) and/or AC Adapter 100 ... 240V DC, 50/60Hz
Temperature range:	0 - 40°C
Air humidity:	85% RH, max.

Special accessories:



Belt-clip holster

Delivery includes: Stroboscope with carrying case and manufacturer's inspection report, battery recharger with 4 adapters for world wide use, jack 3.5 mm plug for trigger signal, operating manual in several languages

Series 2000

Compact stroboscopes

Standard features:

- 4 different models
- Light weight and handy size
- Analog or digital display
- Mains use or battery-operated



Accumulator/Charger Model 2020.01

Accumulator: In leather case with fastening clip, about 2h of continuous use (depending on flash rate), weight approx. 1 kg

Charger: Required power 230V AC, output 12V DC



Leather case

Model 2000.10



Model 2000-B

Model 2000-ND

Specifications	Model 2000-N	Model 2000-B	Model 2000-ND	Model 2000-BD
Flash range:	2.5 - 300Hz = 150 - 18000 min ⁻¹ with 2 overlapping ranges			
Power supply*:	230VAC ± 10 %	12V DC	230VAC ± 10 %	12V DC
	50/60Hz		50/60Hz	
Light intensity:	350Lux, max. (depending on flash rate)			
Flash duration:	7µs, max.			
Accuracy:	< ± 1% of set value		± 1 min ⁻¹ (quartz time)	
Display:	analog		LCD 5 digit, 5 mm high	
Flash tube:	Xenon-longlife (Lifetime approx. 100 million flashes)			
Temperature range:	5 - 45 °C			
Air humidity:	85 % RH, max.			
Housing material:	Plastic shatterproof			
Dimensions:	155 x 80 x 65 mm (LxWxH)			
Weight, net (gross):	approx. 600g (800g)			
Special accessories:				
Accumulator/Charger*:		Model 2020.01		Model 2020.01
Leather case:	Model 2000.10	Model 2000.10	Model 2000.10	Model 2000.10

* Standard 230V
(Should you require 115V, please indicate in your order)

Model DT-311 N

Mains operated, portable

Standard features:

- For revolutions up to 35000 min⁻¹
- Easy to operate controls
- Easy to read LED display
- Detachable pistol-grip handle and mounting possibility on tripod
- Double-flash (x2) and half-rate (÷2) flash selection for easy determination of true flash rate
- Provides synchronizing pulse output for other stroboscopes
- Accepts external trigger input: Phase shift adjustment 0° to 359° permits movement of objects to desired position for best view and flash photography
- Flash delay switch to move a freezed object slowly within 6s
- Rugged aluminium housing



Model DT-315 N

With internal battery, portable

Additional features:

Same functions as Model DT-311 N, but additionally with:

- Integrated rechargeable battery, 12V power required
- AC adapter for recharging and/or mains operating



AC adapter for rechargeable battery (included)



Model DT-311 N

Model DT-315 N

Specifications	Model DT-311 N	■ Model DT-315 N
Flash range:	0.7 - 585 Hz = 40-35000 min ⁻¹ (rpm) automatic range control	
Accuracy:	± 0.1% of reading, ± 1 digit	
Resolution:	40-4999 min ⁻¹ : 0.1 min ⁻¹ ; 5000-7999 min ⁻¹ : 0.2 min ⁻¹ 8000-9999 min ⁻¹ : 0.5 min ⁻¹ ; 10000-35000 min ⁻¹ : 1 min ⁻¹	
Light intensity:	approx. 300Lux (depending on flash rate)	
Flash duration:	10-40µs	
Display update time:	approx. 0.2s	
Display:	LED 5 digit, 10mm high	
Flash tube:	Xenon, 10 W (Lifetime approx. 100 million flashes)	
Phase shift:	0°-359° with 1° resolution	
Triggering input signal:	H-level: 2.5-12V – L-level: 0-0.8V, pulse width minimum 50µs, positive edge trigger; input resistance approx. 4.7KΩ	
Output signal for sensor:	12V ± 0.6V DC, 40mA	
Power supply*:	230VAC ± 10%, 50/60Hz	■ 10.5-15V DC (2.3A) ■ NiCd battery (1h continuous use) ■ and/or AC adapter 230V DC
Temperature range:	5-45°C	
Air humidity:	85% RH, max.	
Housing material:	Aluminium profil, ABS	
Dimensions:		■ 250x120x120 mm (LxWxH)
Weight, net (gross):	approx. 1200g (1800g)	■ approx. 2000g (3200g)

* Standard 230V

(Should you require 115V, please indicate in your order – extra charge)



Operating elements of Series DT Stroboscopes

- | | |
|---|--|
| <p>① Signal Switch
For switching from internal to external signal (triggering)</p> <p>② x2 Switch
For doubling the flash rate</p> <p>③ ÷2 Switch
For dividing the flash rate</p> <p>④ Speed Setter
For setting the flash frequency and delay angle for trigger mode</p> <p>⑤ Input and Output Connector
— Input for trigger signal
— Output for sensor connection</p> <p>⑥ Display Unit Switch
(only in trigger mode)
<i>rpm</i>: displays flashes per minute from 40.0 to 35000 min⁻¹</p> | <p><i>deg</i>: displays flash delay angle in degrees from 0 to 359°</p> <p><i>msec</i>: displays the flash delay time in milliseconds</p> <p>⑦ + Switch
When an object appears to be standing still, pressing this switch will give the illusion that the object is moving <u>towards the rotating direction</u> at a speed of 1 rotation in 6 seconds.</p> <p>⑧ - Switch
When an object appears to be standing still, pressing this switch will give the illusion that the object is moving <u>in the reverse direction</u> at a speed of 1 rotation in 6 seconds.</p> <p>⑨ Power Switch</p> |
|---|--|

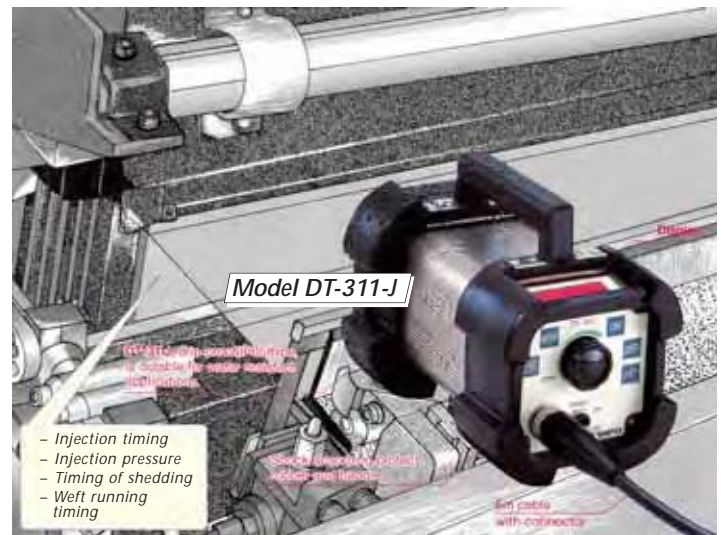
Special-Purpose Stroboscopes



Model DT-315 N-H

Model DT-315 N-H

Stroboscopes, for example, with shock-absorbing design using rubber end caps (Code H)



Model DT-311-J

Model DT-311-J

Stroboscopes, for example, for weaving machines in the textile industry ...

Special brochures in English available on request!